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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,754	03/06/2001	Christopher Boscolo	248588007US	3879

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EXAMINER
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ADAMS, JONATHAN R

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/800,754	<b>Applicant(s)</b> BOSCOLO ET AL.	
	<b>Examiner</b> Jonathan R Adams	<b>Art Unit</b> 2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11-16, <sup>18-29</sup>~~18-29~~, 31, 33, 42, 43 rejected under 35 U.S.C. 102(b) as being anticipated by Poisson et al., US Patent No 6701358 (hereafter referred to as '358)..

As to claim(s) 11, 25, 26, 27, 28, 33:

3. '358 teaches a remote VPN configuration system allowing for on-the-fly configuration/modification of VPN network switches from a master comprising generating properties for first security device to direct the participation of first/second security device and distributing properties generated for the first security device to the first/second security device / Transmitting/configuring the configuration information to/at each switch (Col 3, Lines 43-45, '358), after being configured the VPN permits secure communication between a first/second computer in first/second private networks (Col 3, Line 46-50, '358).

4. As to claim(s) 12:

Properties generated for first device are distinct from second security device / list of network links 222 that enable an administrator to manually configure an individual extranet switch (Col 7, Line 60-62, '358)

5. As to claim(s) 13:

Generated properties are adopted by both security devices to establish virtual private network / after being configured the VPN permits secure communication between a first/second computer in first/second private networks (Col 3, Line 46-50, '358).

6. As to claim(s) 14:

Transmitting the generated properties to the security devices in response to inquiries from the security devices / Request/response update model (Col 6, Line 66-67, '358)

7. As to claim(s) 15:

Transmitting the generated properties to the security devices / transmitting the configuration information to/at each switch (Col 3, Lines 43-45, '358)

8. As to claim(s) 16:

Receiving a single set of VPN specifications in the server computer system without any user input subsequent to receiving specifications / After input of VPN properties, properties are transmitted/configured to/at switches (Col 2, Lines 10-17, '358)

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9. As to claim(s) 18:

Properties include security properties related to data traveling in the virtual private network / Switch properties include encryption schemes (Col 3, Line 31, '358)

10. As to claim(s) 19:

Security properties specify encryption parameters / Switch properties include encryption schemes (Col 3, Line 31, '358)

11. As to claim(s) 20:

Generated properties include resource properties relating to sources and destinations in the private networks / defining a common domain for multiple switches, refer to source/destination switches by domain name and hostname (Col 5, Line 17-20, '358)

12. As to claim(s) 21:

Resource properties specify addresses of network nodes within the private networks that send and receive data / defining a common domain for multiple switches, refer to source/destination switches by domain name and hostname (Col 5, Line 17-20, '358)

13. As to claim(s) 22:

Generated properties include service properties relating to classes of data that may travel in the virtual private network / the administrator can also enable or disable different communication protocols such as http, snmp, ftp... (Col 5, Line 34-37, '358)

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14. As to claim(s) 23:

Service properties specify network protocols / the administrator can also enable or disable different communication protocols such as http, snmp, ftp... (Col 5, Line 34-37, '358)

15. As to claim(s) 24:

Performing the generating and distributing for one or more additional security devices to establish the VPN / the manager can bulk configure multiple extranet switches (Col 2, Line 61-62, '358)

16. As to claim(s) 29:

At least one of the managed computer systems is a dedicated network security device / extranet switches enforce rules that maintain a secure virtual private network (Col 3, Line 18-20, '358)

17. As to claim(s) 31:

Caching the managed properties until delivery / copied from configuration information of a previously configured switch (Col 4, Line 21-22, '358)

18. As to claim(s) 42:

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Locally managed properties and remotely-managed properties / The bulk configuration information can be specified by a user, provided by a program that automatically configures switches, or copied from configuration information of a previously configured switch (Col 6, Line 19-23, '358)

Manager computer system communicatively connected to the distinguished computer system which manages the remotely-managed properties / VPN manager (Fig 1, Element 116, '358)

19. As to claim(s) 43:

Computing system is a specialized network security device / extranet switches enforce rules that maintain a secure virtual private network (Col 3, Line 18-20, '358)

***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 1, 5, 8, 9, 17, 30, 34-41 rejected under 35 U.S.C. 103(a) as being unpatentable over '358

22. As to claim(s) 1, 5, 17, 30, 34-41:

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'358 teaches a remote VPN configuration system allowing for on-the-fly configuration/modification of VPN network switches comprising:

- Maintaining a set of current properties on the subject computer / An extranet switch manager provides administrators with a tool that centralizes management of different extranet switches in a virtual private network (Col 2, Line 58-60, '358)
- Receiving new subject computer properties in helper computer / Transmitting current properties from subject computer to helper computer / The bulk configuration information can be specified by a user, provided by a program that automatically configures switches, or copied from configuration information of a previously configured switch (Col 6, Line 19-23, '358)
- Transmitting new properties to subject computer / In subject computer adopting the new/current merged properties / transmitting/configuring the configuration information to/at each switch (Col 3, Lines 43-45, '358)

23. Although '358 teaches to functionality of copying all properties from a switch and modifying properties of a switch, '358 does not teach for does not specifically teach to update a switch with a modification of the copy/template from the switch. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the steps of copying all properties from a switch and modifying properties of a switch as stated in '358. One of ordinary skill in the art would have been motivated to combine these steps because this would save steps and time for the administrator system in performing these actions together.



As to claim(s) 8:

24. '358 as modified above teaches a remote VPN configuration system allowing for the combined steps of copying/merging the complete set of properties from a switch.

'358 further teaches the use of a periodic update scheme and a request/response update scheme (Col 6-7, Lines 66-2, '358). '358 as modified above does not specifically teach for the receiving computer to initiate the periodic update function. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the request/response update initiation with the periodic update initiation stated in the invention of '358. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the request/respons the periodic update initiation stated in the invention of '358 because the requesting computer has the functionality and the combination provides an alternative for accomplishing the same result.

25. As to claim(s) 9:

Merged properties include instruction to adopt the merged properties / the reception of requested update properties can be defined as an instruction to adopt

26. Claim 2, 10, 32 rejected under 35 U.S.C. 103(a) as being unpatentable '358 in view of West et al., US Patent No 5528602 (hereafter referred to as '602).

As to claim(s) 2, 10, 32:

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27. '358 as modified above teaches a remote VPN configuration system allowing for the combined steps of copying the complete set of properties from a switch and modifying the settings. '358 does not teach to generate a digest of the modified and current properties or compare the digests. '602 teaches creating/comparing digest checksums to compare the values of computer subsystem properties. It would have been obvious to a person of ordinary skill in the art at the time of invention to create/compare digest checksums to compare the values of computer subsystem properties as done in '602 in the invention of '358. One of ordinary skill in the art would have been motivated to create/compare digest checksums to compare the values of computer subsystem properties as done in '602 in the invention of '358 because doing so would determine whether the switch already contained the updated properties saving updating time.

28. Claims 3, 4, 6, 7 rejected under 35 U.S.C. 103(a) as being unpatentable over '358 in view of '602 in further view of Bruce Schneier, "Applied Cryptography".

As to claim(s) 3, 4:

29. '358 as modified above teaches a remote VPN configuration system allowing for the combined steps of copying/modifying the complete set of properties from a switch and using a digest checksum to determine property equivalence. '358 as modified above does not teach for the checksum digests to be generated from a hashing function such as MD5. Schneier teaches the use of hashing functions such as MD5 to produce a value that indicates whether a candidate pre-image is likely to be the same as the real

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pre-image (Page 30, Line 25 et seq., Schneier), (Page 429, 436, Schneier). It would have been obvious to a person of ordinary skill in the art at the time of invention to use the MD5 hashing function as taught by Schneier in the invention of '358 as modified above. One of ordinary skill in the art would have been motivated to use the MD5 hashing function as taught by Schneier in the invention of '358 as modified above because MD5 represents a cryptographically secure version of digest checksum which is much less likely to produce a collision.

30. As to claim(s) 6:

Deleting properties in the copy of current properties identified by administrative properties among the current properties / as broadly as defined, any properties that are not modified identify properties that are modified, and can be defined as administrative. See rejection for claim 1.

31. As to claim(s) 7:

Adding to current properties administrative properties identifying other properties added to the current properties / When a current property configuration is updated, the copy of properties that is modified constitutes administrative properties before modification. See rejection for claim 6.

### ***Conclusion***

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan R Adams whose telephone number is (571)272-3832. The examiner can normally be reached on Monday – Friday from 10am to 6pm.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is (571)272-3838. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

GREGORY MORSE  
SUPERVISORY DATE  
TECHNICAL

